Version with Markings to Show Changes Made U.S. Serial No. 09/619,220

Please amend the specification by deleting the paragraph beginning at page 5, line 10 and ending at page 5, line 11 and replacing it with the following paragraph. A marked copy of this paragraph is attached.

Figures 9, 10, 11, 12, 13, [and] 14, 15, and 16 are illustrations of various embodiments of the present invention.

Please amend the specification at page 11, line 32 through page 12, line 5 as follows:

Another area in which RFID systems offer an advantage over barcode-based systems is in the identification of multiple items. By using sophisticated software algorithms, RFID readers and markers cooperate to insure that all items in the reader's interrogation zone are successfully identified without intervention by the operator. This capability enables the development of numerous useful applications in the areas of inventory control, item tracking, and sorting that would be difficult [of] or impossible to implement with barcode-based identification systems.

Please amend the specification at page 13, lines 8-21, by deleting the paragraph and replacing it with the following:

In one embodiment, a 3M "Tattle-Tape™" brand security strip, or other equivalent magnetic element, may be used as a linear dipole antenna to operate at 2.45 GHz or a similar high frequency. The length, width and thickness of this strip are selected to match the particular operating frequency and other characteristics of the RFID chip used. Typically, the strip would be made from permalloy (available from a number of sources including Carpenter Specialty Alloys, Reading, PA, under the trade name "HyMu80") or an amorphous alloy such as that available from the AlliedSignal Company of Morristown, [NY] NJ, under the designation 2705M, and its length would be between 6.35 and 16.5 cm (2.5 and 6.5 inches). The terminals of the integrated circuit would be physically connected to the ends of the security strip. Electrical measurements of impedance and power gain have established that such a magnetic strip provides the same fundamental electrical characteristics as the copper or

aluminum dipole antennas normally used with such a chip, and thus it would be expected to perform both functions satisfactorily.

Please amend the specification by deleting the paragraph beginning at page 23, line 28 and ending at page 24, line 9 and replacing it with the following paragraph. A marked copy of this paragraph is attached.

A particularly useful embodiment of the hand-held RFID device is as follows. A hand-held RFID device is provided in which the RFID reader, use interface, power source, antenna, processor, and software are all provided in a single integrated unit, as shown in Figure 13. By using a hand-held computer such as the Palm Pilot described above, a number of real-time functions of the type described below can be achieved, in contrast to systems in which the RFID device must interact with a separate computer, database, software system, and the like. The software can also provide either limited or full-range capabilities for supporting functions of the type described herein, as desired. The hand-held RFID device also preferably includes an integral power source, although it can be tethered to a larger power source of the type that might be worn around a user's waist. In the case of an integral power source, the source may or may not power the processor, and may be recharged when connected to a docking station. When a hand-held computer is used, it may include its own power source, and may be recharged when connected to the docking station to upload and/or download information, as shown in Figure 14. Figure 15 illustrates an embodiment of the present invention in which a computer 202, an antenna 104 to transmit commands between an RFID tag and an RFID reader, an RFID reader 102 for reading information from multiple RFID elements substantially simultaneously, and a display 204 are provided as an integrated unit. Computer 202 and display 204 may be components of a detachable hand-held computer 206, such as a Palm Pilot. Figure 15 also illustrates an integral power source 200, a wireless data transfer system (indicated by arrow 203), and a trigger 207. Figure 16 illustrates a separate power source 201 that is tethered to the device, and a cabled connection 205.